CHAPTER 9

FIGHTING ON THE DIGITIZED BATTLEFIELD

The division commander moved with 1st Brigade as his division, equipped with modern technological enhancements, continued its attack in zone. The 1st and 2d Brigades were attacking side by side. The main effort, 1st Brigade, was on the north; 2d Brigade, making a supporting attack, was on the south. Although some images appeared a bit grainy, the commander could easily follow the movements of his forces on his command and control vehicle's display unit. He could see Task Force Dragon, 1st Brigade's lead task force, closing quickly on its electronic line of deployment.

"Dragon 6 to all Dragon units... Move... Over!"

In perfect ripple, subordinate commanders responded: "Dragon 20.. .Move... Out."

"Dragon 30.. .Move... Out."

"Dragon 40... Move... Out."

LTC Smith, the task force (TF) commander, entered the launch command into his onboard computer with one key stroke. The word 'MOVE' flashed red in the bottom left corner of all task force vehicles' command displays. Dragon task force deployed.

LTC Smith patched his scouts' optical scanner and the UAV video into his central processing unit. His advanced land combat task force of MIA3s and M2A5s rolled across the desert toward the enemy positions 25 kilometers away. The dispersed task force effectively evaded the enemy's artillery concentrations.

Attacking at 50 kilometers per hour, the task force converged only momentarily to slip through pinpointed passages in obstacles, then dispersed again. The enemy's obstacles were placed to hold an attacker, but they barely slowed the task force as it moved behind engineer assault vehicles using liquid explosion in-stride breaching techniques.

The defender was alert, well armed, and ready. His forces were much better than the Iraqi army destroyed in Operation Desert Storm. His new training technologies, long-range antitank (AT) weapons, and improved T-80 tanks had given him confidence. However, this confidence now began to wane.

LTC Smith's vehicle and his rear command post synchronized their common view displays of the zone of action. They could see that most targets had already been acquired by UAVs, processed and correlated at ground centers, and attacked by Comanches with blinding speed and violence. The bulb of dug-in enemy vehicles were smoldering as the task force rolled past. (Obviously the enemy had not been ready for the Comanches' stand-off range and "smart" munitions.) Dragon TF vehicles scanned for signs of live enemy. With their second generation forward-looking infrared sights, TF gunners could easily identify the images of TF vehicles as "friendlies."

Ten kilometers from the "hot" enemy sensings forward of the airfield, the TF vehicles swerved hard right in unison. The battalion commander had directed the preventive movement simultaneously to the force through his vehicle's onboard computer-decision-support processor. The maneuver worked. Enemy artillery fire fell along the task force's previous axis.

The task force's information exchange was automatic—all command vehicles and the rear command post knew precisely where everything was and where it was supposed to be. There was no guessing, no lack of information or intelligence. And there was no mistaken identity.

Friendly artillery was being fired with pinpoint accuracy from the recently acquired advanced field artillery system guns, with each enemy position taking a precision "burst" of advanced projectiles in a time on target (TOT). Overhead, two small UAVs were circling, providing precise, real-time targeting data and battle damage assessment. These miniature aircraft were loaded with reduced-weight imaging infrared, millimeter wave, and optical correlators. Their information was available simultaneously throughout Task Force Dragon.

The defender was no match for the violent combat power massed on him. It must have seemed to him like both magic and a nightmare—not a battle, but an almost instantaneous blanket of destruction accurately pinpointed across his entire force. The enemy commander could only watch as his dug-in tanks and AT weapons were destroyed in a 15-second wave of precision task force fires.

It was over in minutes. The Task Force Dragon infantry dismounted and, in total darkness, rounded up stunned groups of prisoners. With virtually no sound, they swept through buildings, hangars, and underground facilities. Each Dragon soldier was equipped with integrated protection gear. The light-weight space-age Kevlar jump suit of integrated circuits provided communications, position location, thermal imagery target acquisition, and identification, friend or foe (IFF). The suit was specifically designed for dismounted assaults and clearing operations at night.

LTC Smith's digital monitor read... "OBJECTIVE 2005 SECURED!"

THE IMPACT OF NEW TECHNOLOGY

An unparalleled change in our culture has occurred through the proliferation of microprocessors and their application to communications and shared information. Continued improvements in this technology are disrupting our old ways of doing business. As a result, Army divisions will continue to evolve how they collect, process, absorb, store, distribute, and communicate information. What is "state of the art" in warfighting technology today may be obsolete and replaced tomorrow.

The digitized force has significant advantages over conventionally equipped forces. Digital technologies increase situational awareness; improve the planning, preparation, and distribution of orders; enhance the timeliness and accuracy of reporting processes; and enable precision fires to establish the preconditions for decisive maneuver. Commanders who leverage these capabilities have a significant advantage over an enemy who is not equipped with equal technology.

The introduction of digital technologies into the Army will not occur simultaneously throughout the force. Within the corps, the integration of digitally equipped units with conventionally equipped units presents unique challenges for the commander and the staff. Procedures must exist for communicating with and supporting all elements of the force (joint, multinational, government, or nongovernment agencies). This communication is achieved through exchanging liaison officers and establishing additional voice communication capabilities. Operations are synchronized through battle drills and SOPs. Finally, digital information is processed for distribution to conventionally equipped units via compatible means.

Once achieved, automation enhancements in the electronic connectivity between and among all Army echelons will result in more speed, precision, agility, and flexibility in our divisions. Ongoing enhancements have already improved the division's lethality, serviceability, versatility, sustainability, and deployability. In short, as technology advances, divisions will generate greater combat power and precision when and where needed.

DIGITIZATION

The Army defines digitization as near-real-time transfer of battlefield information between diverse fighting elements to permit a shared awareness of the tactical situation. The goal of digitization is to create global, integrated digital information networks that support the warfighter. Through digitization, the division commander and his staff will rapidly transfer, receive, or query information and

its sources. When the Army achieves this goal, our commanders will have friendly and enemy operational and service support information that is much more accurate and processed faster than at anytime in the past. The digitization effort will affect every battlefield operating system.

In ***intelligence,*** digitization will allow the commander to cue intelligence collection resources based on information received from a variety of sensors and systems. This process will optimize resources by using intelligence assets and activities more efficiently. Digital imagery and other intelligence products will be directly downlinked from satellite systems simultaneously into command posts and combat vehicles (even while they move).

Digitization in ***maneuver*** will allow for a smaller friendly force, supported by precise, responsive fires, to defeat or destroy an enemy. Commanders may employ a smaller number of maneuver forces during the decisive phase of the battle with less risk. Digitization will also result in pinpoint navigation through a global positioning system (GPS). Forces will move faster and more safely over familiar and unfamiliar terrain.

In ***fire support,*** digitization will provide automatic entry into fire control nets from any unit on the battlefield. Fire support requests, together with computer-generated fire mission reports, will update intelligence data bases, displays, and staff estimates with information such as enemy locations, units, kills, and BDA. The result will be faster and more precise fire support, less rounds fired, and a more accurate intelligence picture of the enemy. Further, digitization in fire support will—

- Automate tire planning and fire control. Fire planning that is computer-assisted will optimize tires and distribute accurate and up-to-date fire control measures throughout the friendly force. The end product will be faster, and more effective, fires with much less risk of fratricide and accidental damage to protected areas and targets.
- Allow staff officers to more precisely target and track an exponentially greater number of targets than we have ever targeted or tracked in the past.
- Provide direct, automated sensor-to-shooter links resulting in significantly faster fire support.

Digitization in ***mobility and survivability*** will enhance mobility and survivability planning, execution, and resupply. Obstacles—enemy, friendly, and terrain (with their passage lanes)—will be cataloged, numbered, described in detail, and displayed throughout our force and be available to follow-on forces. Digitization of these functions will result in less fratricide and better information on obstacles. Digitization will improve the accuracy, timeliness, and efficiency of engineer estimates; use of engineer resources; and obstacle plan development with computer-generated planning tools and data bases.

In ***air defense,*** computer-generated airspace control graphics and planning templates will enhance airspace command and control. A^2C^2 information will be provided to all appropriate command posts, command vehicles, and directly into aircraft. Digitization will also allow better and faster IFF identification and minimize fratricide. Faster and more precise tracking and engagements will significantly limit the effect of enemy air attacks on division operations.

Digitization in ***combat service support*** will result in computer-generated CSS reports sent from onboard vehicle computers to central data bases. Access to these data bases will result in precise resupply requirements compiled for each soldier, vehicle, and unit.

Digitization will also reform health support. Computer-generated medical evacuation requests will incorporate GPS locations, and automatically update personnel, CSS, operational, and medical data files. Use of these files will raise the quality of medical support and result in better personnel estimates and actions.

Requests for repair parts and other supply items will be automatically generated. These will enter a central data base that can be accessed from anywhere in the world. Responses to these requests can be packaged and sent to appropriate supporting units and identified for specific systems. All units concerned will be notified simultaneously as requests are sent and requisitions are filled. Digitization will result in more accurate and more efficient combat service support.

In ***command and control,*** digitization will allow automated unit reports and graphic overlay reports. These will be sent to central databases that provide commanders with an accurate picture of the situation. The automation and burst data transmission

of reports will eliminate late, inaccurate, or incomplete reports. The requirements for radio conversation will be less.

Doctrinally correct operational graphics will be created and distributed rapidly to the force. (This is a great improvement over our current manually drawn graphics reproduced on copying machines and distributed by a messenger.) This change will result in precise, accurate, and up-to-date control measures throughout the friendly force. Digitized friendly and enemy unit locations will result in a common view and understanding of the battlefield.

Communications, planning, and decision making within the force will also be improved. Burst-transmitted digital data files will be added to our more traditional means of communications (for example, FM, AM, FAX, teletype, telephone, and messenger). More precise and up-to-date information together with computer-generated decision tools will result in faster planning and decision making.

Digitization will better focus limited assets and resources. Commanders can cue resources based on information received from a variety of sensors and systems. This process will optimize assets and activities to accomplish the assigned mission.

Through digitization, redundant communication means will limit loss of communication between units. These means include digital message equipment, computer nets, traditional radio nets, facsimile, conventional telephone systems, cellular telephones, and satellite communications.

AUTOMATION ARCHITECTURE

The backbone of the division's digitization efforts will be the Army Battle Command System (ABCS), discussed in Chapter 3. ABCS will be composed of—

- Maneuver Control System (MCS).
- Advanced Field Artillery Tactical Data System (AFATDS).
- All Source Analysis System (ASAS).
- Air Defense Command and Control System (ADCCS).
- Combat Service Support Control System (CSSCS).

When fully implemented ABCS will—

- Link installation sustainment information systems that include intelligence, weather, and combat service support to deployed forces.
- Link the warfighters to any command post (both higher and lower) through satellite-based warfighter nets. This allows commanders to command and control from anywhere on the battlefield.
- Link sensors to shooters for quick, precision fires with no fratricide or collateral damage to protected targets.
- Provide warriors a digital information system that links all weapon systems to each other as well as command posts.
- Provide commanders with automated decision tools that access real-time friendly and enemy information and can be used while moving or stationary.
- Provide central processing and distribution of information. Units can access this central processor from home station and staging bases, as well as within the theater of operation. Access to the processor will be worldwide.

New technologies will continue to change the way we control forces. However, no matter how sophisticated technology becomes, commanders will make decisions and provide the leadership to accomplish missions.